

CLAIMS

1. An apparatus for controlling the operation of a quality feedback channel in a wireless communication system, comprising:
 - a memory element; and
 - a processing element configured to execute a set of instructions stored on the memory element, the set of instructions for:
 - determining a channel quality value associated with a transmission channel;
 - determining a condition of the transmission channel;
 - if the transmission channel condition is favorable, then transmitting the channel quality value over one slot of the channel quality feedback channel; and
 - if the channel condition is not favorable, then transmitting the channel quality value over a plurality of slots of the channel quality feedback channel.
2. The apparatus of Claim 1, wherein the condition of the transmission channel is based upon a velocity estimate.
3. The apparatus of Claim 1, wherein the condition of the transmission channel is based upon a power level estimate.
4. The apparatus of Claim 1, wherein the condition of the transmission channel is based upon whether a fast fade occurs in the transmission channel.
5. A method for improving the reception of a channel quality value, comprising:

determining whether the condition of a transmission channel is favorable;
if the condition of the transmission channel is favorable, then transmitting the channel quality value over one slot of a feedback channel; and
if the condition of the transmission channel is unfavorable, then transmitting the channel quality value over more than one slot of the feedback channel.

6. The method of Claim 5, wherein transmitting the channel quality value over more than one slot of the feedback channel further comprises:

repeating the channel quality value over a frame of the feedback channel.

7. The method of Claim 5, wherein the channel condition is unfavorable if a first station and a second station travel at a high velocity in relation to each other, wherein the first station originates the feedback channel and the second station originates the transmission channel.

8. A method for improving the reception of a channel quality value at a base station, comprising:

determining whether the condition of a feedback channel from a remote station is favorable;

if the condition of the channel is unfavorable, then transmitting a control signal to the remote station, wherein the control signal triggers a reduced rate mode for transmitting the channel quality value over a feedback channel from the remote station; and

if the condition of the channel is favorable, then allowing the remote station to control the transmission of the channel quality value over the feedback channel.

9. An apparatus for improving the reception of a channel quality value at a base station, comprising:

means for determining whether the condition of a feedback channel from a remote station is favorable;

means for transmitting a control signal to the remote station if the condition of the channel is unfavorable, wherein the control signal triggers a reduced rate mode for transmitting the channel quality value over a feedback channel from the remote station; and if the condition of the channel is favorable, then allowing the remote station to control the transmission of the channel quality value over the feedback channel.